

Hypertension: A Case Study

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Abstract- The trends of diseases has been changed from the last few years, now the burden of non-communicable diseases is increasing day by day. In all the Non communicable diseases, Hypertension is one of the leading cause of premature death and morbidity worldwide. . This disease is a silent killer, it mostly affect the people with no obvious symptoms. Not only the heart it also increases the risk of brain, kidney and other diseases, now a days it is a serious medical problem. Over a billion people near about 1 in 4 men and 1 in 5 women having hypertension. In this case study 60 years old women with Hypertension was identified in community remote area and checked the Health status of the client and monitored for one week and Health Education was provided for the importance of regular Health checkup and continuous taking of medications.

Keywords- Non Communicable diseases, Hypertension

I. INTRODUCTION

Although several organisations have provided a definition of hypertension, it is not easy to define. The American Heart Association states that high blood pressure or hypertension occurs when the blood's constant flow through blood vessels is too strong.¹ The condition of hypertension, commonly referred to as high or rising blood pressure, is characterised by a consistently elevated pressure in the blood arteries. The vessels transport blood from the heart to every region of the body. The heart pumps blood into the vessels with each beat. As blood is pumped by the heart, it pushes against the walls of blood vessels (arteries), creating blood pressure. The heart needs to work more to pump blood when the pressure is higher². The idea that blood pressure in a population is constantly distributed as a bell-shaped curve with no actual distinction between normotension and hypertension was initially put out by Sir George Peckering.³ There is a clear link between hypertension and cardiovascular illnesses. More cardiovascular illnesses are at risk when blood pressure is higher. Only around 1 in 5 persons with hypertension have the condition under control, which affects almost 1.13 billion people globally. Over 700 million individuals worldwide do not receive treatment for their hypertension.

Most Americans who have high blood pressure are unaware that they have it, which affects close to half of the population. On the other hand, high blood pressure is more prevalent in low-income nations. In India, hypertension affects roughly 29.8% of the population (in urban areas 33.8 percent and in rural areas 27.6 percent). With 1.32 billion people, India is seeing an upsurge in CVD illness, which is mostly brought on by uncontrolled hypertension.

II. CASE PRESENTATION

In June 2022 community health nurse visited a family in which a 60 years old female client was found with increased blood pressure at the remote hilly region of District Sirmour, Himachal Pradesh.

Past medical History: There is no significant past medical history other than Hypertension.

Past Surgical History: There is no significant past surgical history.

General Examination: Date: 17-6-22

Anthropometric Assessment

- Height: 163 cm
- Weight: 60 kg
- BMI= Weight/Height in m²

$$60/(1.63)^2 = 22.59 \text{ (Normal)}$$

In the Community continuously the blood pressure was assessed by the Community health Nurse for one week and the reading of blood pressure are as follow:

Day	Systolic Blood Pressure (mmHg)	Diastolic Blood Pressure (mmHg)
1	140	88
2	144	86
3	144	80
4	130	84
5	144	80

Treatment:

Tablet Amlodipine 5mg daily since 2018

Nursing Care Plan :

1. Risk of decreased cardiac output related to increased vascular pressure within the blood vessels. Ineffective coping related to chronicity of the disease.
2. Knowledge deficient related to hypertension as evidenced by curiosity of the client related to the care plan.

Nursing Care and Education:

- Monitoring of blood pressure on regular interval.
- Advised to follow strict diet restriction, especially the controlled amount of salt not more than 5 gm salt per day.
- Advised the client to perform the daily moderate aerobic exercises at least for 45 minutes and 150-300 minutes per week.
- Determine the cause of ineffective coping and stressful event
- Encourage the client to perform stress reduction like yoga and meditation.
- Encouraged the client to follow the drug as prescribed, to increase the compliance.
- Reducing modifiable risk factors is the best way to prevent hypertension and associated diseases of the heart, brain, kidney and other organs. These factors include unhealthy diets (excessive salt consumption, a diet high in saturated fat and trans fats, low intake of fruits and vegetables), physical inactivity, consumption of tobacco and alcohol, and being overweight or obese.
- Hypertension can be managed by reducing and managing mental stress.
- Cessation of tobacco use and the harmful use of alcohol, as well as improvements in diet and exercise, can help reduce symptoms and risk factors from hypertension.

Outcome: Client has gained good knowledge regarding the hypertension, now the client had started doing yoga and meditation daily for 20 minutes.

III. DISCUSSION

In June 2022 as a community health nurse we have visited a family in which a 60 years old female client was

found with increased blood pressure. The blood pressure of the client is raised as per the American Heart association client is having stage 1 hypertension. For the management of HTN client is only taking the Antihypertensive drugs, but after the intervention client was also involved in stress relieving activities and Yoga.

Research findings suggest that risk factors for coronary heart disease (CHD) and stroke, particularly the role of blood pressure, may be different for black American and white individuals. Some studies indicate that effective treatment of hypertension in black Americans results in a decrease in the incidence of CVD to a level that is similar to that of nonblack American hypertensives.⁴

Approximately 30% of all deaths in hypertensive black American men and 20% of all deaths in hypertensive black American women are attributable to high blood pressure. Black Americans develop high blood pressure at an earlier age, and hypertension is more severe in every decade of life, compared with whites. As a result, black Americans have a 1.3 times greater rate of nonfatal stroke, a 1.8 times greater rate of fatal stroke, a 1.5 times greater rate of heart disease deaths, and a 5 times greater rate of ESRD when compared with whites. Therefore, there is a need for aggressive antihypertensive treatment in this group. Newer, better tolerated antihypertensive drugs, which have the advantages of fewer adverse effects combined with greater antihypertensive efficacy, may be of great benefit to this patient population.⁵

IV. CONCLUSION

In this case study 60 years old women with Hypertension was identified in community remote area and checked the Health status of the client and monitored for one week and Health Education was provided for the importance of regular Health checkup and continuous taking of medications.

An ideal blood pressure is 130/80. She should check her blood pressure at home after taking the medicine regularly, then go back to the clinic in a month. Consideration should be made to escalating therapy by raising the dose of the initial drug or introducing a second agent if the BP objective is not attained at that point despite adherence to treatment.

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